

# **EXHIBIT BZ**

**To:** John LaBarre[jlabarre@google.com]; Allen Lo[alo@google.com]; Isorell@google.com[Isorell@google.com]  
**Cc:** Tom Cullen[Tom.Cullen@sonos.com]; Alaina Kwasizur[Alaina.Kwasizur@sonos.com]; Craig Shelburne[Craig.Shelburne@sonos.com]  
**From:** Mark Triplett[O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=694E76097D884EE989D4D92F32BBE9B4-MARK TRIPLETT]  
**Sent:** Thur 10/13/2016 2:39:48 PM Eastern Standard Time  
**Subject:** RE: Sonos Meeting Follow Up  
**Attachment:** Google Education Material 10\_13\_06.pdf

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Hi John and Lou,

Attached is the other round of educational material that I mentioned in my email below. I apologize for not sending it last week. It should be helpful to better understand how certain Sonos patents relate to Google.

Also, please confirm our meeting on Tuesday, the 25<sup>th</sup> in sunny Santa Barbara and suggest a time that works best for you and Lou.

My Best,  
Mark

---

**From:** Mark Triplett  
**Sent:** Thursday, October 06, 2016 10:51 AM  
**To:** 'John LaBarre'; Allen Lo; Isorell@google.com  
**Cc:** Tom Cullen; Alaina Kwasizur; Craig Shelburne  
**Subject:** RE: Sonos Meeting Follow Up

Okay – sounds good John. It's fine if you can't get me the list beforehand...we should meet either way. So, let's plan on Tuesday, the 25th in Santa Barbara.  
See you soon.  
-mark

**From:** John LaBarre [mailto:jlabarre@google.com]  
**Sent:** Wednesday, October 05, 2016 5:52 PM  
**To:** Mark Triplett; Allen Lo; Isorell@google.com  
**Cc:** Tom Cullen; Alaina Kwasizur; Craig Shelburne  
**Subject:** Re: Sonos Meeting Follow Up

Thanks for the note, Mark. Let me confer with Lou, but I think we can make Tuesday work.

We are working towards providing you a preliminary list of relevant Google patents and was planning on providing that list to you at the meeting (or perhaps a few days in advance). If that doesn't suit your needs, we can commit to providing you the list that week, and then we could have our follow-up meeting at some later point (e.g., two-three weeks after that).

Please just let me know your preference (*i.e.*, work towards a meeting on the 25th with us providing you our list on the 21st OR provide you our list on the 21st and set up a meeting for sometime in November).

Best,

John

On Wed, Oct 5, 2016 at 3:00 PM Mark Triplett <Mark.Triplett@sonos.com> wrote:  
Hi John,

Thanks for the note. I happen to be in SB the week of the 24<sup>th</sup>. How about either Tuesday or Wednesday? Tuesday is probably best for me. If those days don't work, then please propose another day/time that week and I can rearrange flights.

Your last note mentioned looking to the relevancy of Google's patent portfolio to Sonos's line of business. If you have any Google patents to discuss, I'd kindly ask for the list and their relevance to Sonos products this week so that we can be prepared at some level to discuss them.

We will be sending another round of educational material this week. It should help connect the Sonos patents to more specific features of the Google products.

Thanks,  
Mark

**From:** John LaBarre [mailto:jlabarre@google.com]  
**Sent:** Tuesday, October 04, 2016 1:53 PM  
**To:** Mark Triplett; Allen Lo; Isorell@google.com

**Cc:** Tom Cullen; Alaina Kwasizur; Craig Shelburne  
**Subject:** Re: Sonos Meeting Follow Up

Hi Mark -

I wanted to reach back out to you regarding setting up a time for our meeting. Perhaps the week of October 24th or the week of November 7 (during the intervening week, Lou is overseas on business) works for you? My suggestion is that I could join in person (Santa Barbara?) and that Lou could join via video conference. We are, of course, open to other suggestions as well.

Let us know what works for you.

Best,

John

On Fri, Sep 2, 2016 at 5:46 PM John LaBarre <[jlabarre@google.com](mailto:jlabarre@google.com)> wrote:  
[+Louis Sorell](#)

Thanks, Mark. I've added Lou to the thread.

As for a next meeting, the week of the 19th will, unfortunately, not work (at least for me) as I will be attending a conference overseas that week.

In addition, I feel that at our next meeting, we should be in a position to discuss with you in reciprocal detail our thoughts on the relevancy of Google's patent portfolio to Sonos's lines of business. Based on our conversation this week, we are preparing to undertake such an assessment, but probably will need several weeks before we will even be in a initial place to have such discussions.

I will confer with Lou and propose alternative dates next week.

Regards,

John

On Fri, Sep 2, 2016 at 5:25 PM Mark Triplett <[Mark.Triplett@sonos.com](mailto:Mark.Triplett@sonos.com)> wrote:  
Hi all,

Thanks again for meeting on Wednesday. I appreciate your willingness to understand what Sonos has invented and protected over the years, and how that IP is relevant to Google. Pursuant to your request, my team and I will prepare material to educate Lou and/or John (I don't have Lou's email, so please forward to him) at a level between what I presented at the meeting and claim charts. We can also show the top 20 most interesting prior art references, if that's of interest to you. I and a member from my team will be able to walk you through that material the week of September 19th.

Please let me know what days/times work best and I can calendar the time. In the meantime, you have my 3 overview slides and I further included a document that specifically lists:

- (1) 16 patents (directly relevant today)
- (2) 4 allowed patent applications (directly relevant today)
- (3) 8 other patent specifications that those folks close to Cast should readily understand the relevance by reading the overview sections at a minimum.

Again, we seek to reach a licensing agreement with Google for the Sonos portfolio of utility patents. My team works hard to maximize the value of each of our patents and the value is evidenced by our finding that over 50% of them are practiced today. To drive the continued value of our patents, we interview every case with the Patent Office and we are interested in always learning. If you have something to share with us about any particular patent(s) as it relates to Google, we are all ears. We keep the patent families alive to ensure over time that we accurately and precisely protect all the patentable innovations brought to this world by Sonos.

To reiterate, I don't view any of this information as confidential – I value a transparent and open approach to our continued work together.

Enjoy a nice, long weekend in observance of the Labor Day holiday!

My Best,  
Mark

**Mark Triplett**  
Sonos Intellectual Property | [630.297.9099](tel:630.297.9099) | [mark.triplett@sonos.com](mailto:mark.triplett@sonos.com)

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John LaBarre | Patent Transactions | Google Inc. | [917-971-5593](tel:917-971-5593)

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Thanks.

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John LaBarre | Patent Transactions | Google Inc. | [917-971-5593](tel:917-971-5593)

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# SONOS

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## Overview of Selected Sonos Patent Assets Relevant to Google

October 2016

FOR DISCUSSION PURPOSES ONLY – SUBJECT TO FRE 408

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4.....	Chromecast Audio Dongle
10.....	Google Cast Application
16.....	Google Play Music Application
20.....	Google Cast SDK, Partner Speakers and Applications

Appendix A Index According to Example Google Product

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*“For years, Sonos has been synonymous with the concept of multi-room audio, so much so that it’s almost hard to know which came first. At the very least, Sonos spotted a trend long before its competitors – at most, it’s responsible for making the market what it is today.” - What Hi-Fi*

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## Summary of Relevant Google Features

The table below identifies patents and allowed patent applications containing claims that are believed to be relevant to one or more Google products.

Sonos notes that the identified patents and patent applications may also be relevant to other existing and/or future Google products that incorporate similar features and/or functionality, including but not limited to, e.g., Google Pixel.

Google Feature	Patent or Allowed Application	Relevant Google Products
<b>Audio Distribution Between Devices</b> Playback device distributes audio to another playback device.	9,213,357; 9,189,011	<ul style="list-style-type: none"> <li>Google Chromecast Audio Dongle devices</li> <li>Google Home</li> <li>Google Cast SDK and Google Cast Speaker Product devices</li> </ul>
<b>Synchronization of Playback Between Devices</b> Synchronize playback of the same audio between playback devices.	8,938,637; 8,370,678; 8,689,036; 9,348,354	<ul style="list-style-type: none"> <li>Google Chromecast Audio Dongle devices</li> <li>Google Home</li> <li>Google Cast SDK and Google Speaker Product devices</li> </ul>
<b>Group Formation of Devices</b> Dynamically form groups of multiple playback devices.	9,182,777; 9,288,596; 9,164,532; 9,218,017  *14/041,989	<ul style="list-style-type: none"> <li>Google Chromecast Audio Dongle devices</li> <li>Google Home</li> <li>Google Cast SDK and Google Cast Speaker Product devices</li> <li>Google Cast Application</li> <li>Google Android Devices with Cast and/or Play Applications</li> </ul>
<b>Group Maintenance/Status Information</b> The playback system (including a controller device) is aware of the playback devices and groups of playback devices within the playback system.	9,195,258; 9,207,905; 9,170,600; 9,213,356; 9,348,824	<ul style="list-style-type: none"> <li>Google Chromecast Audio Dongle devices</li> <li>Google Home</li> <li>Google Cast SDK and Google Cast Speaker Product devices</li> <li>Google Cast Application</li> <li>Google Play Music Application</li> <li>Google Android Devices with Cast and/or Play Applications</li> </ul>
<b>Group Volume Control</b> Control the volume level of playback devices and groups of playback devices within the playback system.	8,588,949 <sup>1</sup> ; 7,571,014	<ul style="list-style-type: none"> <li>Google Cast SDK and Google Cast Partner Control Applications</li> <li>Google Cast Application</li> <li>Google Play Music Application</li> <li>Google Android Devices with Cast and/or Play Applications</li> </ul>
<b>Setup Using Inaudible Tones</b> Use inaudible tones to set up and provide access to control playback devices (e.g., quick guest access).	8,930,005  *14/558,944 *14/679,815	<ul style="list-style-type: none"> <li>Google Chromecast Audio Dongle devices</li> <li>Google Cast SDK and Google Cast Partner Control Applications</li> <li>Google Cast Application</li> </ul>

<sup>1</sup> Reexamination Certificate issued Nov. 5, 2015. Reexamination Request No. 90/013,423.

		<ul style="list-style-type: none"> <li>• Google Play Music Application</li> <li>• Google Android Devices with Cast and/or Play Applications</li> </ul>
<b>Fault Tolerance</b> A playback device goes offline (e.g., lose power) and returns online (e.g., gain power) and returns to its original playback state.	*14/521,682	<ul style="list-style-type: none"> <li>• Google Chromecast Audio Dongle devices</li> <li>• Google Home</li> <li>• Google Cast SDK and Google Cast Speaker Product devices</li> </ul>
<b>Playback Transfer</b> Transfer playback of a song from a music service application (e.g., Google Play) to a playback device (e.g., Google Chromecast Audio Dongle device).	*14/520,566	<ul style="list-style-type: none"> <li>• Google Cast SDK and Google Cast Partner Control Applications</li> <li>• Google Cast Application</li> <li>• Google Play Music Application</li> <li>• Google YouTube Application</li> <li>• Google YT Music Application</li> <li>• Google Android Devices with Cast and/or Play Applications</li> </ul>
<b>Silent Connect</b> Automatically reconnect a controller application to control a playback device (e.g., Google Chromecast device) upon returning to the proximity of the playback device.	*13/904,949	<ul style="list-style-type: none"> <li>• Google Cast SDK and Google Cast Partner Control Applications</li> <li>• Google YouTube Application</li> <li>• Google YT Music Application</li> <li>• Google Android Devices with YouTube and/or YT Music Applications</li> </ul>
<b>Additional Selected/Representative Patents Relevant to Cast Partner Speaker Product “Vertical” Features</b> Various selected “vertical” playback system features including, e.g., stereo pair, line-in processing, establishing a secure wireless network, instantiation of zone scenes (including alarms), and cloud-based queues that are believed to be practiced by Google Cast Speaker Product devices and/or Google.	9,219,959 <sup>2</sup> ; 9,202,509; 8,938,312; 8,483,853	<ul style="list-style-type: none"> <li>• Google Cast SDK and Google Cast Speaker Product devices</li> </ul>

\*Allowed claims

<sup>2</sup> Order Granting Request for Ex Parte Reexamination entered in Reexamination Request No. 90/013,756.

## Chromecast Audio Dongle



# CHROMECAST AUDIO

\$35

[BUY NOW](#)

## Chromecast Audio Dongle<sup>3</sup>

### 1. Audio Distribution Between Devices



*Sonos Website, 2004*

### Play music everywhere with Multi-room

Multi-room lets you group Chromecast Audio devices together so you can listen to the same song on multiple speakers.

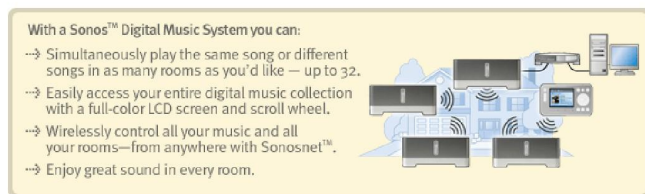
*Google 2016*

The following **2 patents** include claims relevant to the distribution of audio between Chromecast Audio Dongle devices.

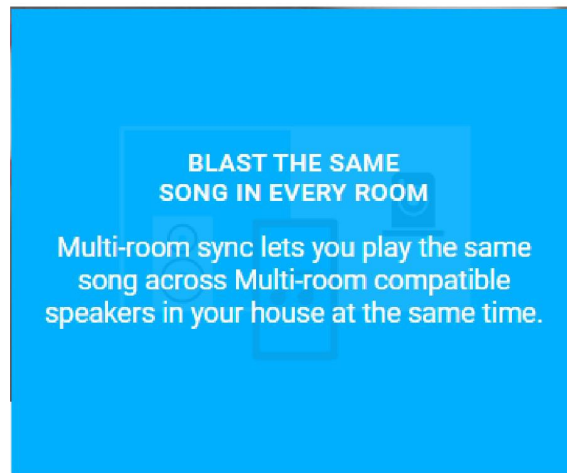
- Pat. No. 9,213,357
- Pat. No. 9,189,011

<sup>3</sup> Based on information available publically to date, there is an expectation that many of the patents identified will also be relevant to the forthcoming Google Home product.

## 2. Synchronization of Playback Between Devices



**Sonos Website, 2004**



**Google 2016**

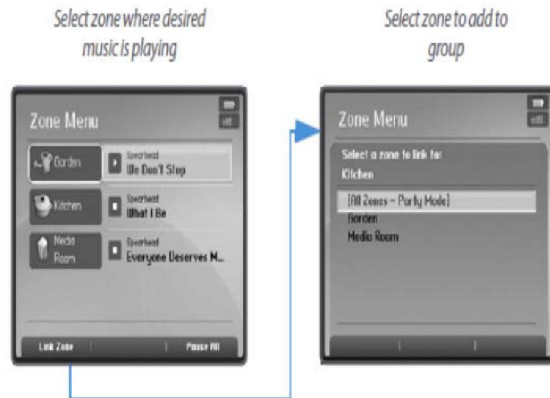
The following **4 patents** include patent claims relevant to synchronization of playback between Chromecast Audio Dongle devices.

- Pat. No. 9,938,637
- Pat. No. 8,370,678
- Pat. No. 8,689,036
- Pat. No. 9,348,354

### 3. Group Formation of Devices

To add a zone to a zone group

1. Touch the **Zones** button on your Controller.



*Sonos User Guide, 2005*

Play same music across multiple speakers

Google Cast lets you group **select speakers** together to play the same song everywhere.

*Google 2016*

The following **1 patent** includes patent claims relevant to group formation of Chromecast Audio Dongle devices.

- Pat. No. 9,182,777

The following **1 patent** includes patent claims relevant to group formation of Chromecast Audio Dongle devices, including specifically the election of a master device for the group.

- Pat. No. 9,288,596

The following **1 additional disclosure** includes disclosure and/or patent claims believed to be relevant to group formation of Chromecast Audio Dongle devices, including specifically the election of a master device for the group.

- App. No. 14/041,989

## 4. Group Maintenance/Status Information



Touch the Zones button to view the music playing in each room

*Sonos User Guide, 2005*

Play same music across multiple speakers

Google Cast lets you group **select speakers** together to play the same song everywhere.

*Google 2016*

The following **4 patents** include patent claims relevant to the maintenance of and status of groups of Chromecast Audio Dongle devices.

- Pat. No. 9,195,258
- Pat. No. 9,207,905
- Pat. No. 9,170,600
- Pat. No. 9,213,356

The following **1 patent** includes patent claims relevant to the maintenance of and status of groups of Chromecast Audio Dongle devices, including identification of particular devices according to group identification.

- Pat. No. 9,348,824

## 5. Setup Over WiFi

### 1-2-3 Setup

It takes just 3 steps to get your Sonos Digital Music System up and running:

- 1 Connect speakers to your ZonePlayer
- 2 Connect the first Sonos ZonePlayer (with Ethernet cable supplied) to your home network
- 3 Install the computer software (or use a Controller) to configure your music system

*Sonos User Guide, 2005*

Easily cast music, without the hassle of pairing

Tap the Cast button from your favorite music apps to start casting to your speakers. Adjust the volume or change the song, right from your phone.

Unlike Bluetooth setup, Google Cast works over WiFi so you can connect more than one device to your speakers at a time and control what's playing from anywhere in the house.

*Google 2016*

The following **patent disclosure** includes disclosure believed to be relevant to the setup of Chromecast Audio Dongle devices on a WiFi LAN now or in the future.

- Pat. No. 8,326,951

## 6. Setup Using Inaudible Tones

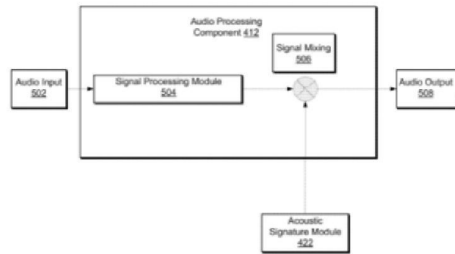
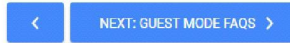


FIGURE 5

**Sonos Pat. No. 8,930,005, 2012**

Chromecast guest mode

### Guest mode PIN



A 4-digit PIN is required for connecting to a Chromecast in guest mode. When a device nearby tries to connect, the Chromecast automatically transfers that PIN using short, inaudible audio tones. If the audio tone pairing fails, your guest will be given the option to connect manually by entering the 4-digit PIN.

**Google 2016**

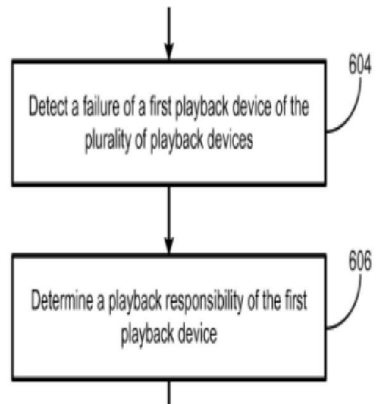
The following **1 patent** includes patent claims relevant the setup of Chromecast Audio Dongle devices using inaudible tones.

- Pat. No. 8,930,005

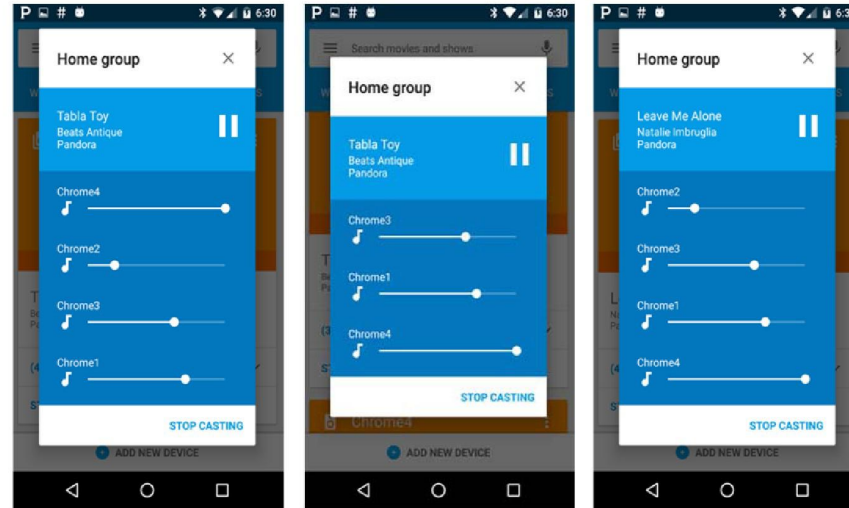
The following **2 allowed patent applications** includes patent claims relevant the setup of Chromecast Audio Dongle devices using inaudible tones.

- App. No. 14/558,944
- App. No. 14/679,815

## 7. Fault Tolerance



**Sonos Pat. App. No. 14/679,815, 2012**

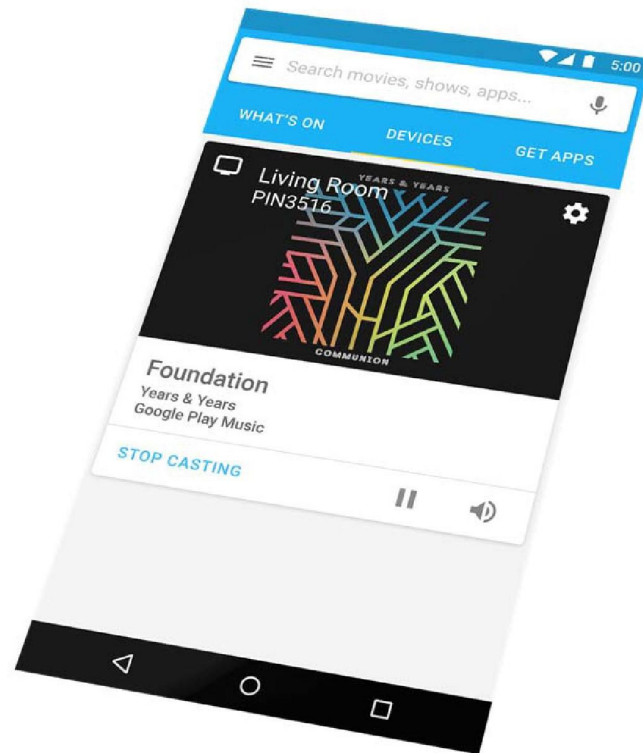


**Google 2016**

The following **allowed patent application** includes patent claims relevant the fault tolerance of Chromecast Audio Dongle devices, including when a given device goes offline and returns online.

- App. No. 14/679,815

## Google Cast Application



## Google Cast Application<sup>4</sup>

### 1. Cast Application Group Formation of Devices

To add a zone to a zone group

1. Touch the **Zones** button on your Controller.

Select zone where desired  
music is playing

Select zone to add to  
group



*Sonos User Guide, 2005*

Play same music across multiple speakers

Google Cast lets you group **select speakers** together to play the same song everywhere.

*Google 2016*

The following **2 patents** include patent claims relevant to the creation of groups using the Google Cast application.

\*Some claim limitations may be additionally and/or alternatively relevant to the Google Play Music Application.

- Pat. No. 9,164,532
- Pat. No. 9,218,017

<sup>4</sup> Some patent assets identified in this section are also relevant to Android with the Google Cast application and/or an Android device (such as a Google Nexus or Google Pixel device) running Android with the Google Cast application.

## 2. Group Volume Control



*Sonos User Guide, 2005*



*Google 2016*

The following **2 patents** include patent claims relevant to control of group volume using the Cast application.

\*Some claim limitations may be additionally and/or alternatively relevant to the Google Play Music Application.

- Pat. No. 8,588,949
- Pat. No. 7,571,014

### 3. Setup Over Wifi

#### 1-2-3 Setup

It takes just 3 steps to get your Sonos Digital Music System up and running:

- 1 Connect speakers to your ZonePlayer
- 2 Connect the first Sonos ZonePlayer (with Ethernet cable supplied) to your home network
- 3 Install the computer software (or use a Controller) to configure your music system

***Sonos User Guide, 2005***

Easily cast music, without the hassle of pairing

Tap the Cast button from your favorite music apps to start casting to your speakers. Adjust the volume or change the song, right from your phone.

Unlike Bluetooth setup, Google Cast works over WiFi so you can connect more than one device to your speakers at a time and control what's playing from anywhere in the house.

***Google 2016***

The following ***patent disclosure*** includes disclosure believed to be relevant to the setup of Chromecast Audio Dongle devices on a WiFi LAN now or in the future.

- Pat. No. 8,326,951

## 4. Setup Using Inaudible Tones

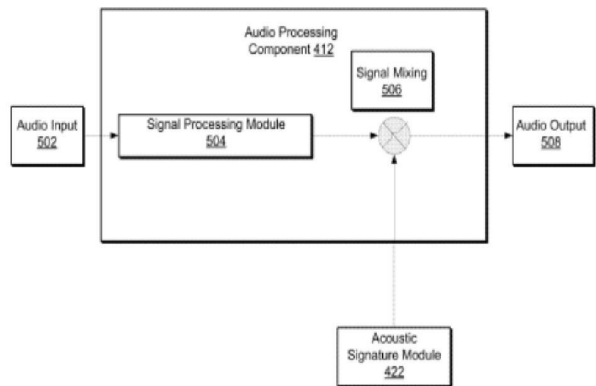
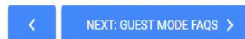


FIGURE 5

**Sonos Pat. No. 8,930,005, 2012**

Chromecast guest mode

Guest mode PIN



A 4-digit PIN is required for connecting to a Chromecast in guest mode. When a device nearby tries to connect, the Chromecast automatically transfers that PIN using short, inaudible audio tones. If the audio tone pairing fails, your guest will be given the option to connect manually by entering the 4-digit PIN.

**Google 2016**

The following **1 patent** includes patent claims relevant the setup of Chromecast Audio Dongle devices using inaudible tones and the Google Cast application.

- Pat. No. 8,930,005

The following **allowed patent application** includes patent claims relevant the setup of Chromecast Audio Dongle devices using inaudible tones and the Google Cast application.

- App. No. 14/679,815

## 5. Group Maintenance/Status Information

Playback Device ID	Group ID	Group Coordinator	Display Name
Device1	Group1	Y	Living Room + Dining Room
Device2	Group1	N	--
Device3	Group5	Y	Balcony
Device4	Group4	Y	Master Bedroom

FIGURE 6C

**Sonos Pat. No. 9,348,824, 2014**

Play same music across multiple speakers

Google Cast lets you group **select speakers** together to play the same song everywhere.

**Google 2016**

The following **1 patent** includes patent claims relevant to the maintenance of and status of groups of Chromecast Audio Dongle devices, including identification of particular devices according to group identification.

Pat. No. 9,348,824

## Google Play Music Application

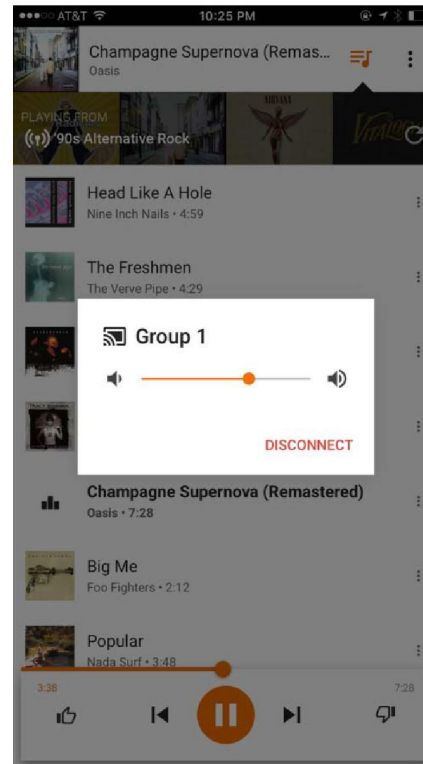


# Google Play Music Application<sup>5</sup>

## 1. Group Volume Control



*Sonos User Guide, 2005*



*Google 2016*

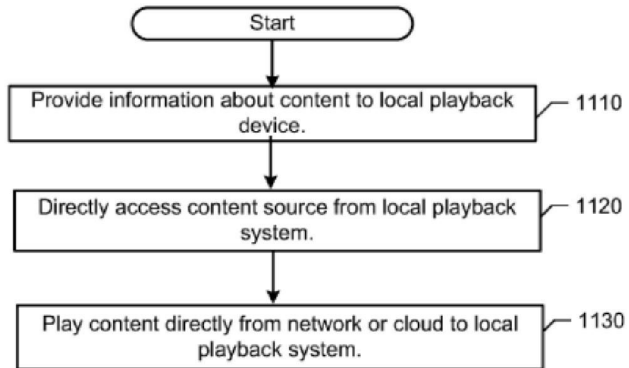
The following **2 patents** include patent claims relevant to control of group volume using the Cast application.

\*Some claim limitations may be additionally and/or alternatively relevant to the Google Cast application.

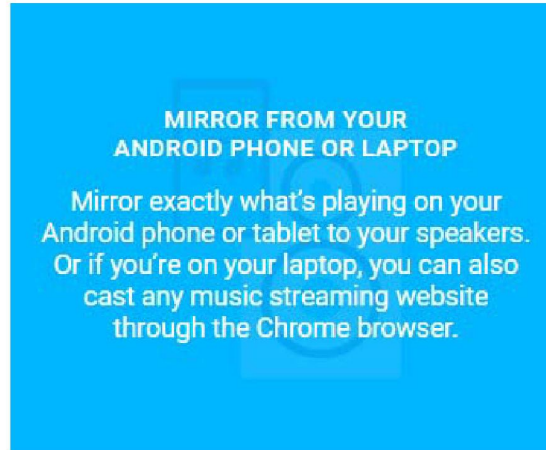
- Pat. No. 8,588,949
- Pat. No. 7,571,014

<sup>5</sup> Some patent assets identified in this section are also relevant to Android with the Google Play Music Application and/or an Android device (such as a Google Pixel or a Google Nexus device) running Android with the Google Play Music Application.

## 2. Playback Transfer



**Sonos Pat. App. No. 14/520,566, 2011**



**Google 2016**

The following **allowed patent application** includes patent claims relevant to the transfer of playback from the Google Play Music Application to a Chromecast Audio Dongle device.

- App. No. 14/520,566

### 3. Group Maintenance/Status Information

Playback Device ID	Group ID	Group Coordinator	Display Name
Device1	Group1	Y	Living Room + Dining Room
Device2	Group1	N	--
Device3	Group5	Y	Balcony
Device4	Group4	Y	Master Bedroom

FIGURE 6C

**Sonos Pat. No. 9,348,824, 2014**

Play same music across multiple speakers

Google Cast lets you group **select speakers** together to play the same song everywhere.

**Google 2016**











The following **1 patent** includes patent claims relevant to the maintenance of and status of groups of Chromecast Audio Dongle devices, including identification of particular devices according to group identification.

- Pat. No. 9,348,824

## Google Cast SDK, Partner Speakers and Applications

Find speakers with Google Cast

Select Google Cast speakers from any of our partners below:

				
 COMING SOON	 COMING SOON	 COMING SOON	 COMING SOON	

## Google Cast SDK, Partner Speakers and Applications

### 1. Audio Distribution Between Devices



*Sonos Website, 2004*

#### Customize Your Home Audio

Customize your home audio experience with Multi-Room Mode. Synchronize your different MusicFlow speakers to play the same music or family members can choose their own music in separate rooms.



*LG MusicFlow with Cast, 2016*

The following **2 patents** include claims relevant to the distribution of audio between Google Partner Speaker devices implementing the Google Cast SDK.

- Pat. No. 9,213,357
- Pat. No. 9,189,011

## 2. Synchronization of Playback Between Devices

With a Sonos™ Digital Music System you can:

- Simultaneously play the same song or different songs in as many rooms as you'd like — up to 32.
- Easily access your entire digital music collection with a full-color LCD screen and scroll wheel.
- Wirelessly control all your music and all your rooms—from anywhere with Sonosnet™.
- Enjoy great sound in every room.



**Sonos Website, 2004**

### Multi-Room Pairing.

Connect multiple VIZIO SmartCast™ Speakers and Sound Bars over Wi-Fi to fill your entire home with music. Pair speakers throughout the house to play them all in unison, or play different songs in different rooms.



**Vizio SmartCast with Cast, 2016**

The following **4 patents** include patent claims relevant to synchronization of playback between Google Partner Speaker devices implementing the Google Cast SDK.

- Pat. No. 9,938,637
- Pat. No. 8,370,678
- Pat. No. 8,689,036
- Pat. No. 9,348,354

### 3. Group Formation of Devices

To add a zone to a zone group

1. Touch the **Zones** button on your Controller.

Select zone where desired  
music is playing

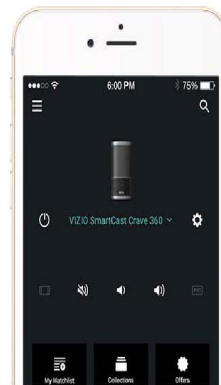


Select zone to add to  
group



*Sonos User Guide, 2005*

Turn Your Phone Into The Ultimate Remote.



Download the VIZIO SmartCast App for free on the  
App Store and Google Play. Easily set up and  
control your multi-room speaker like never before.



*Vizio SmartCast with Cast, 2016*

The following **1 patent** includes patent claims relevant to group formation of Google Partner Speaker devices implementing the Google Cast SDK.

- Pat. No. 9,182,777

The following **1 patent** includes patent claims relevant to group formation of Google Partner Speaker devices implementing the Google Cast SDK, including specifically the election of a master device for the group.

- Pat. No. 9,288,596

The following **2 patents** include patent claims relevant to the creation of groups using Google Partner Speaker applications implementing the Google Cast SDK.

\*Some claim limitations may be additionally and/or alternatively relevant to the Google Cast application.

- Pat. No. 9,164,532
- Pat. No. 9,218,017

The following **1 additional disclosure** includes disclosure and/or patent claims believed to be relevant to group formation of Google Partner Speaker devices implementing the Google Cast SDK, including specifically the election of a master device for the group.

- App. No. 14/041,989

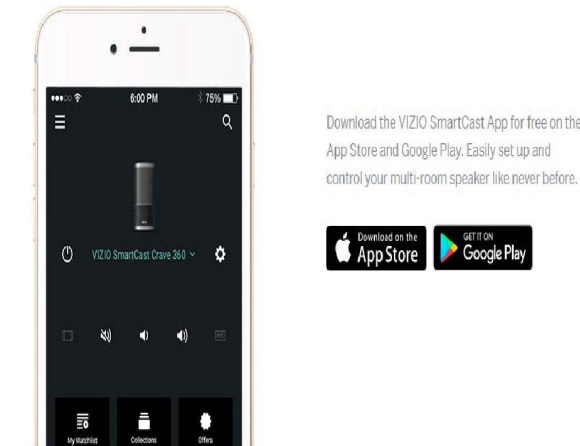
## 4. Group Maintenance/Status Information



*Touch the Zones button to view the music playing in each room*

**Sonos User Guide, 2005**

### Turn Your Phone Into The Ultimate Remote.



**Vizio SmartCast with Cast, 2016**

The following **4 patents** include patent claims relevant to the maintenance of and status of groups of Google Partner Speaker devices implementing the Google Cast SDK.

- Pat. No. 9,195,258
- Pat. No. 9,207,905
- Pat. No. 9,170,600
- Pat. No. 9,213,356

The following **1 patent** includes patent claims relevant to the maintenance of and status of groups of Google Partner Speaker devices implementing the Google Cast SDK, including identification of particular devices according to group identification.

- Pat. No. 9,348,824

## 5. Setup Over WiFi

### 1-2-3 Setup

It takes just 3 steps to get your Sonos Digital Music System up and running:

- 1 Connect speakers to your ZonePlayer
- 2 Connect the first Sonos ZonePlayer (with Ethernet cable supplied) to your home network
- 3 Install the computer software (or use a Controller) to configure your music system

*Sonos User Guide, 2005*

### Simple Setup

Music Flow speakers can be set up almost anywhere, following a few uncomplicated steps, in just minutes you'll be enjoying your music as never before.

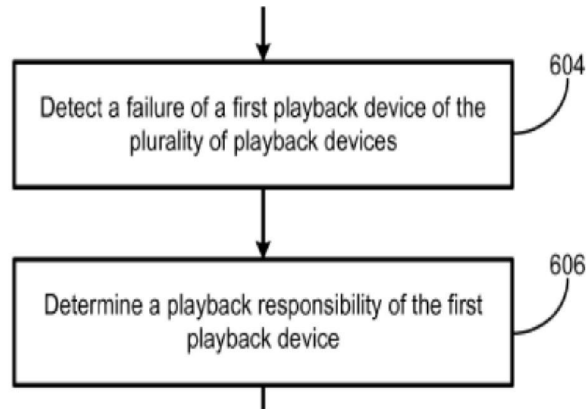


*LG MusicFlow with Cast, 2016*

The following **patent disclosure** includes disclosure believed to be relevant to the setup of Google Partner Speaker devices implementing the Google Cast SDK on a WiFi LAN now or in the future.

- Pat. No. 8,326,951

## 6. Fault Tolerance



**Sonos Pat. App. No. 14/679,815, 2012**

### Keep The Connection

MusicFlow is designed to minimize those pesky drop in connection that interrupt your jam. LG's Mesh Network combined with Dual Band Wi-Fi technology lets you enjoy high-definition music on a more stable, seamless connection.

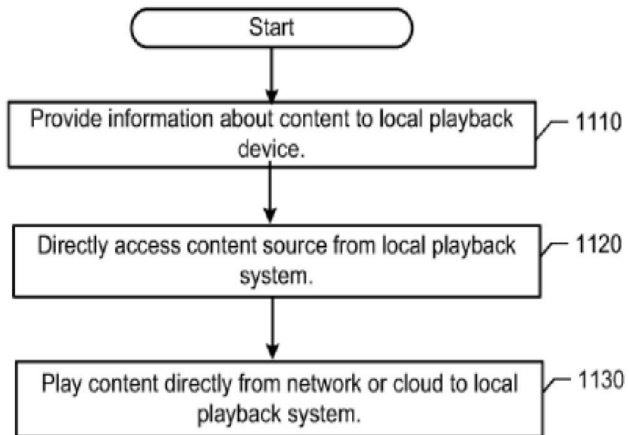


**LG MusicFlow with Cast, 2016**

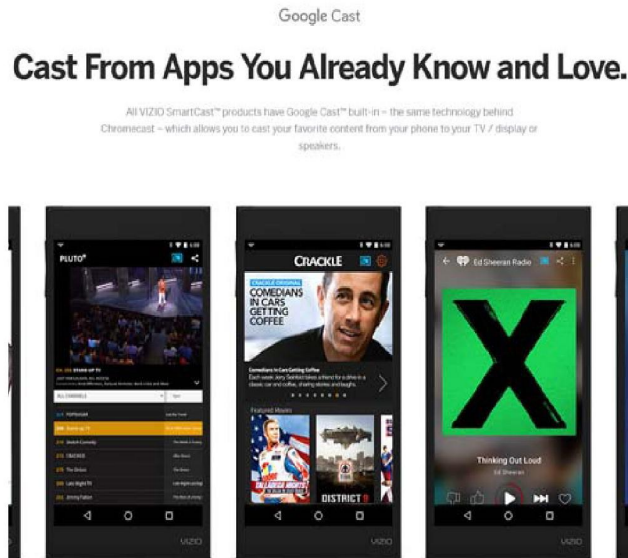
The following **allowed patent application** includes patent claims relevant the fault tolerance of Google Partner Speaker devices implementing the Google Cast SDK, including when a given device goes offline and returns online.

- App. No. 14/679,815

## 7. Playback Transfer



*Sonos Pat. App. No. 14/520,566, 2011*



*Vizio SmartCast with Cast, 2016*

The following ***allowed patent application*** includes patent claims relevant to the transfer of playback from Google Partner Speaker applications implementing the Google Cast SDK.

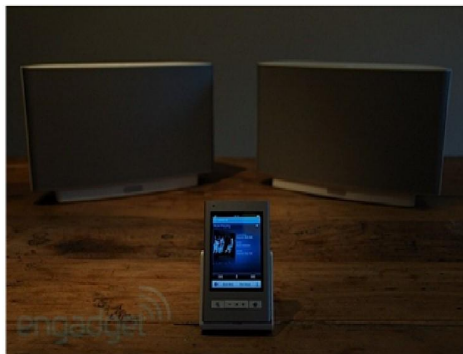
- App. No. 14/520,566

## 8. Stereo Pairing [EXAMPLE “VERTICAL” FEATURE]

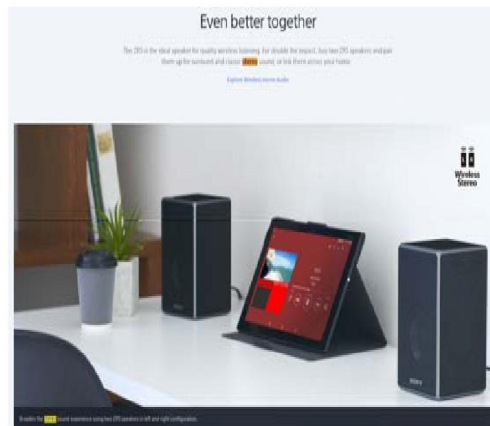
Sonos 3.2 update and S5 stereo pairing put to the test

Thomas Ricker, @trixxy  
05.12.10

0  
Shares



*Engadget on Sonos, 2010*



*Sony with Cast, 2016*

The following **patent disclosures** includes disclosure and/or patent claims believed to be relevant, now or in the future, to arranging, in a Stereo Pair, Google Partner Speaker devices implementing the Google Cast SDK.

- Pat. No. 9,219,959
- Pat. No. 9,202,509

## 9. Line-In Processing [EXAMPLE “VERTICAL” FEATURE]

### Autoplay

Line-In Autoplay feature will allow you to automatically play music when a signal is being sent to the Line-In port. Connect the audio line-in cable provided with your Sonos product (or a standard RCA cable) from the Audio out connection(s) on the external source to the analog Audio In connection(s) on the back of your Sonos product. The source device will automatically be detected and displayed on the Sonos controller.

**Sonos, 2012**

#### CONNECTION HUB

### HASSLE-FREE CONNECTIVITY

The B&O PLAY Connection Hub\* allows you to hook up Beoplay S8 to almost any TV and audio sources, using optical or analogue cables.

No extra remotes are needed, as the Connection Hub learns the IR commands from your TV remote or any other remote.

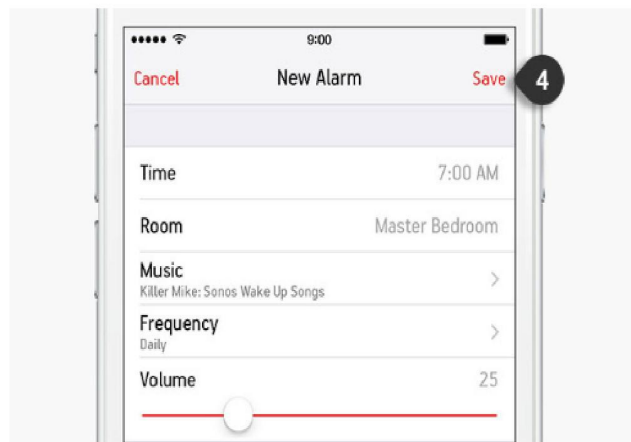
The Connection Hub handles up to 3 connections at a time, and automatically changes to the last audio source to play, so if you're listening to music, and the TV is turned on, the sound of the TV will take over. It's as easy as that!

**B&O with Cast, 2016**

The following **patent disclosure** includes disclosure and/or patent claims believed to be relevant, now or in the future, to line-in switching with Google Partner Speaker devices implementing the Google Cast SDK.

- Pat. No. 8,938,312

## 10. Zone Scenes (Alarms) [EXAMPLE “VERTICAL” FEATURE]



*Sonos, Today*

### Add the alarm

1. Run Music Flow Player application.
  2. Tap [Settings] > [Alarm/Sleep Timer] > [Alarm].
  3. Tap [⊕] . Alarm setting screen appears.
  4. Set the alarm items such as time of day, day of week, speakers, alarm sound, alarm duration, shuffle, volume.
  5. Tap [Set]. Designated speaker plays the music at a set time.
- If the alarm sound is from the the playlist in the devices turned off, default alarm sound is played.

### *LG MusicFlow with Cast, 2016*

The following **patent disclosure** includes disclosure and/or patent claims believed to be relevant, now or in the future, to implementing zone scenes, such as an Alarm, using Google Partner Speaker devices implementing the Google Cast SDK.

- Pat. No. 8,483,853

# APPENDIX A

## Index According to Example Google Product

Page	Example Google Product	Relevant Patents Identified
4	Chromecast Audio Dongle	<p><i>Issued Patents</i> 9,213,357; 9,189,011; 8,938,637; 8,370,678; 8,689,036; 9,348,354; 9,182,777; 9,288,596; 9,195,258; 9,207,905; 9,170,600; 9,213,356; 9,348,824; 8,930,005</p> <p><i>Allowed Applications</i> 14/558,944; 14/679,815; 14/041,989</p>
11	Google Cast Application	<p><i>Issued Patents</i> 9,164,532; 9,218,017; 8,588,949; 7,571,014; 8,930,005; 9,348,824</p> <p><i>Allowed Applications</i> 14/679,815</p>
17	Google Play Music Application	<p><i>Issued Patents</i> 8,588,949; 7,571,014; 9,348,824</p> <p><i>Allowed Applications</i> 14/520,566</p>
21	Google Cast SDK, Partner Speakers and Applications	<p><i>Issued Patents</i> 9,213,357; 9,189,011; 8,938,637; 8,370,678; 8,689,036; 9,348,354; 9,182,777; 9,288,596; 9,195,258; 9,207,905; 9,170,600; 9,213,356; 9,348,824; 9,164,532; 9,218,017</p> <p><i>Allowed Applications</i> 14/679,815; 14/520,566; 14/041,989</p> <p><i>Disclosures Pertaining to "Vertical" Features</i> 9,219,959; 9,202,509; 8,938,312; 9,130,771; 8,483,853; 9,363,255</p>